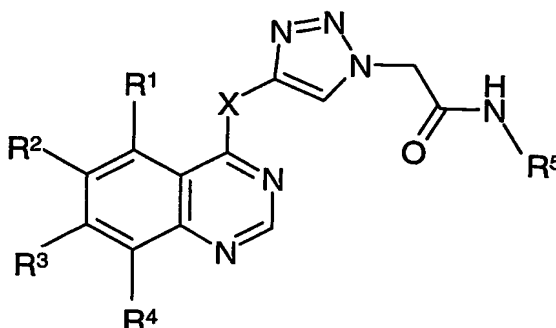


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CLAIMS

What we claim is:

1. A compound of formula (I)



5

or a salt, ester or prodrug thereof;

where:

**X** is O or NR<sup>6</sup>;

**R**<sup>6</sup> is hydrogen or C<sub>1-4</sub>alkyl;

- 10 **R**<sup>1</sup> is hydrogen, halo, or -X<sup>1</sup>R<sup>11</sup>;

**X**<sup>1</sup> is a direct bond, -CH<sub>2</sub>=CH<sub>2</sub>-, -O-, -NH-, -N(C<sub>1-6</sub>alkyl)-, -C(O)-, -C(O)O-, -OC(O)-, -NHC(O)-, -N(C<sub>1-6</sub>alkyl)C(O)-, -C(O)NH or -C(O)N(C<sub>1-6</sub>alkyl)-;

**R**<sup>11</sup> is hydrogen, or a group selected from C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, C<sub>2-6</sub>alkynyl, C<sub>3-6</sub>cycloalkyl, C<sub>3-6</sub>cycloalkenyl, heterocyclyl, heterocyclylC<sub>1-4</sub>alkyl, heterocyclylC<sub>2-4</sub>alkenyl and

- 15 heterocyclylC<sub>2-4</sub>alkynyl which group is optionally substituted by 1 or 2 substituents independently selected from halo, hydroxy, C<sub>1-4</sub>alkoxy, hydroxyC<sub>1-4</sub>alkyl, -NR<sup>9</sup>R<sup>10</sup>, -C(O)R<sup>9</sup>, -C(O)NR<sup>9</sup>R<sup>10</sup> and -C(O)OR<sup>9</sup>;

**R**<sup>2</sup> is hydrogen, halo, nitro, cyano or -X<sup>2</sup>R<sup>12</sup>;

**X**<sup>2</sup> is a direct bond, -O-, -NH-, -N(C<sub>1-6</sub>alkyl)-, -OC(O)- or -C(O)O-;

- 20 **R**<sup>12</sup> is hydrogen, or a group selected from C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, C<sub>2-6</sub>alkynyl, C<sub>3-6</sub>cycloalkyl, C<sub>3-6</sub>cycloalkenyl, aryl, arylC<sub>1-4</sub>alkyl, arylC<sub>2-4</sub>alkenyl, arylC<sub>2-4</sub>alkynyl, heterocyclyl, heterocyclylC<sub>1-4</sub>alkyl, heterocyclylC<sub>2-4</sub>alkenyl and heterocyclylC<sub>2-4</sub>alkynyl, which group is optionally substituted by 1, 2 or 3 substituents independently selected from, halo, hydroxy, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxy, -NR<sup>15</sup>R<sup>16</sup>, -NHC(O)NR<sup>15</sup>R<sup>16</sup>, -C(O)R<sup>15</sup> and -C(O)OR<sup>15</sup>;

- 25 **R**<sup>3</sup> is hydrogen, halo or -X<sup>3</sup>R<sup>13</sup>;

**X**<sup>3</sup> is a direct bond, -CH<sub>2</sub>=CH<sub>2</sub>-, -O-, -NH-, -N(C<sub>1-6</sub>alkyl)-, -C(O)-, -C(O)O-, -OC(O)-, -NHC(O)-, -N(C<sub>1-6</sub>alkyl)C(O)-, -C(O)NH- or -C(O)N(C<sub>1-6</sub>alkyl)-;

$R^{13}$  is hydrogen, or a group selected from  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl,  $C_{3-6}$ cycloalkyl,  $C_{3-6}$ cycloalkenyl, aryl, aryl $C_{1-4}$ alkyl, aryl $C_{2-4}$ alkenyl, aryl $C_{2-4}$ alkynyl, heterocyclyl, heterocyclyl $C_{1-4}$ alkyl, heterocyclyl $C_{2-4}$ alkenyl and heterocyclyl $C_{2-4}$ alkynyl which group is optionally substituted by 1 or 2 substituents independently selected from

- 5  $-NR^7R^8$ ,  $-C(O)NR^7R^8$ , halo, hydroxy,  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy, hydroxy $C_{1-4}$ alkyl, hydroxy $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylcarbonyl, amino $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylamino $C_{1-4}$ alkylcarbonyl and bis( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkylcarbonyl;

- $R^7$  and  $R^8$  are independently selected from hydrogen, heterocyclyl, heterocyclyl $C_{1-4}$ alkyl,  $C_{1-4}$ alkylheterocyclyl $C_{1-4}$ alkyl,  $C_{1-6}$ alkyl, hydroxy $C_{1-6}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-6}$ alkyl,  $C_{3-6}$ cycloalkyl,  $C_{3-6}$ cycloalkyl $C_{1-4}$ alkyl, hydroxy $C_{3-6}$ cycloalkyl, hydroxy $C_{1-4}$ alkyl $C_{3-6}$ cycloalkyl, hydroxy $C_{1-4}$ alkyl $C_{3-6}$ cycloalkyl $C_{1-4}$ alkyl, hydroxy $C_{3-6}$ cycloalkyl $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{3-6}$ cycloalkyl,  $C_{1-4}$ alkoxy $C_{3-6}$ cycloalkyl $C_{1-4}$ alkyl, halo $C_{1-6}$ alkyl, halo $C_{3-6}$ cycloalkyl, halo $C_{3-6}$ cycloalkyl $C_{1-4}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl, cyano $C_{1-4}$ alkyl, amino $C_{1-6}$ alkyl,  $C_{1-4}$ alkylamino $C_{1-6}$ alkyl, bis( $C_{1-4}$ alkyl)amino $C_{1-6}$ alkyl, hydroxy $C_{1-4}$ alkoxy $C_{1-4}$ alkyl, hydroxy $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylcarbonyl, amino $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylamino $C_{1-4}$ alkylcarbonyl and bis( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkylcarbonyl;

or  $R^7$  and  $R^8$  together with the nitrogen to which they are attached form a heterocyclic ring which ring is monocyclic or bicyclic and comprises 4 to 7 ring atoms of which one is nitrogen and of which another is optionally selected from N, NH, O, S, SO and  $SO_2$ , and which ring is

- 20 optionally substituted on carbon or nitrogen by 1 or 2 substituents independently selected from  $C_{1-4}$ alkyl, hydroxy,  $C_{1-4}$ alkoxy, hydroxy $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl, hydroxy $C_{1-4}$ alkoxy $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkoxy, hydroxy $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylcarbonyl, amino $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylamino $C_{1-4}$ alkylcarbonyl and bis( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkylcarbonyl, and where a ring  $-CH_2-$  is optionally replaced with
- 25  $-C(O)-$ ;

$R^4$  is selected from hydrogen, halo or  $-X^4R^{14}$ ;

$X^4$  is a direct bond,  $-O-$ ,  $-NH-$  or  $-N(C_{1-6}alkyl)-$ ;

$R^{14}$  is selected from hydrogen,  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl and  $C_{2-6}$ alkynyl;

- $R^5$  is aryl or heteroaryl optionally substituted by 1, 2 or 3 substituents independently selected
- 30 from halo, hydroxy, cyano, nitro, amino,  $C_{1-4}$ alkylamino, bis( $C_{1-4}$ alkyl)amino,  $C_{1-4}$ alkyl,  $C_{2-4}$ alkenyl,  $C_{2-4}$ alkynyl,  $C_{1-4}$ alkoxy,  $-C(O)NHR^{17}$ ,  $-NHC(O)R^{18}$ ,  $-SR^{17}$ ,  $-S(O)R^{17}$  and  $-S(O)OR^{17}$ ;

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$R^9$ ,  $R^{10}$ ,  $R^{15}$  and  $R^{16}$  are independently selected from hydrogen,  $C_{1-6}$ alkyl,  $C_{3-6}$ cycloalkyl,  $C_{3-6}$ cycloalkyl $C_{1-4}$ alkyl, hydroxy $C_{1-6}$ alkyl, halo $C_{1-6}$ alkyl, amino $C_{1-6}$ alkyl,  $C_{1-4}$ alkylamino $C_{1-6}$ alkyl and bis( $C_{1-4}$ alkyl)amino $C_{1-6}$ alkyl;

or  $R^9$  and  $R^{10}$  together with the nitrogen to which they are attached form a heterocyclic ring  
5 which ring is monocyclic or bicyclic and comprises 4 to 7 ring atoms of which one is nitrogen and of which another is optionally selected from N, NH, O, S, SO and  $SO_2$ , and which ring is optionally substituted on carbon or nitrogen by 1 or 2 substituents independently selected from  $C_{1-4}$ alkyl, hydroxy,  $C_{1-4}$ alkoxy, hydroxy $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl, hydroxy $C_{1-4}$ alkoxy $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkoxy, hydroxy $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylcarbonyl, amino $C_{1-4}$ alkylcarbonyl,  $C_{1-4}$ alkylamino $C_{1-4}$ alkylcarbonyl and bis( $C_{1-4}$ alkyl)amino $C_{1-4}$ alkylcarbonyl,  
10 and where a ring  $-CH_2-$  is optionally replaced with  $-C(O)-$ ;

$R^{17}$  and  $R^{18}$  are independently selected from hydrogen,  $C_{1-4}$ alkyl,  $C_{3-6}$ cycloalkyl,  $C_{2-4}$ alkenyl and  $C_{2-4}$ alkynyl.

15 2. A compound according to claim 1 or a salt, ester or prodrug thereof wherein X is NH.

3. A compound according to claim 1 or a salt, ester or prodrug thereof wherein  $R^4$  is hydrogen.

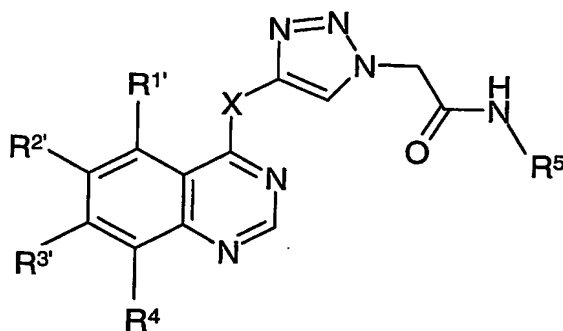
20 4. A compound according to claim 1 or a salt, ester or prodrug thereof wherein  $R^5$  is aryl optionally substituted by 1 or 2 halo.

5. A compound according to claim 1 or a salt, ester or prodrug thereof wherein  $R^1$  is hydrogen or  $-OR^{11}$  and  $R^{11}$  is hydrogen, heterocyclyl selected from piperidinyl or pyrrolidinyl  
25 or  $C_{1-4}$ alkyl which  $C_{1-4}$ alkyl is optionally substituted by hydroxy,  $C_{1-4}$ alkoxy, amino,  $C_{1-4}$ alkylamino or bis( $C_{1-4}$ alkyl)amino.

6. A compound according to claim 1 or a salt, ester or prodrug thereof wherein  $R^2$  is hydrogen or  $-OR^{12}$  and  $R^{12}$  is hydrogen,  $C_{1-4}$ alkyl, heterocyclyl or heterocyclyl $C_{1-4}$ alkyl.

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7. A compound according to claim 1 or a salt, ester or prodrug thereof wherein  $R^3$  is  $-X^3R^{13}$ ,  $X^3$  is  $-\text{CH}_2=\text{CH}_2-$ ,  $-\text{O}-$  or  $-\text{NH}-$ , and  $R^{13}$  is  $\text{C}_{1-6}$ alkyl substituted by  $-\text{NR}^7\text{R}^8$ , heterocyclyl or halo.
8. A compound according to claim 7 or a salt, ester or prodrug thereof wherein  $R^7$  and  $R^8$  are independently selected from hydrogen, heterocyclyl,  $\text{C}_{1-6}$ alkyl, hydroxy $\text{C}_{1-6}$ alkyl, hydroxy $\text{C}_{1-4}$ alkyl $\text{C}_{3-6}$ cycloalkyl,  $\text{C}_{1-4}$ alkoxy $\text{C}_{1-4}$ alkyl,  $\text{C}_{3-6}$ cycloalkyl,  $\text{C}_{3-6}$ cycloalkyl $\text{C}_{1-4}$ alkyl, halo $\text{C}_{1-6}$ alkyl,  $\text{C}_{2-6}$ alkenyl,  $\text{C}_{2-6}$ alkynyl, cyano $\text{C}_{1-4}$ alkyl and bis( $\text{C}_{1-4}$ alkyl)amino $\text{C}_{1-6}$ alkyl; or  $R^7$  and  $R^8$  together with the nitrogen to which they are attached form a heterocyclic ring which ring comprises 4 to 7 ring atoms of which one is nitrogen and of which another is optionally NH or O and which ring is optionally substituted on carbon or nitrogen by a group selected from  $\text{C}_{1-4}$ alkyl, hydroxy, hydroxy $\text{C}_{1-4}$ alkyl and hydroxy $\text{C}_{1-4}$ alkoxy $\text{C}_{1-4}$ alkyl, and where a ring  $-\text{CH}_2-$  is optionally replaced with  $-\text{C}(\text{O})-$ .
9. A compound of formula (IA)



or a salt or ester thereof

where X,  $X^1$ ,  $X^2$ ,  $X^3$ ,  $R^4$  and  $R^5$  are as defined in relation to formula (I) in claim 1 and  $R^{1'}$  is hydrogen, halo, or  $-\text{X}^1\text{R}^{11'}$ ;

- $R^{11'}$  is hydrogen, phosphonooxy or a group selected from  $\text{C}_{1-6}$ alkyl,  $\text{C}_{2-6}$ alkenyl,  $\text{C}_{2-6}$ alkynyl,  $\text{C}_{3-6}$ cycloalkyl,  $\text{C}_{3-6}$ cycloalkenyl, heterocyclyl, heterocyclyl $\text{C}_{1-4}$ alkyl, heterocyclyl $\text{C}_{2-4}$ alkenyl and heterocyclyl $\text{C}_{2-4}$ alkynyl which group is optionally substituted by 1 or 2 substituents independently selected from halo, hydroxy, phosphonooxy,  $\text{C}_{1-4}$ alkoxy, hydroxy $\text{C}_{1-4}$ alkyl, phosphonooxy $\text{C}_{1-4}$ alkyl,  $-\text{NR}^9\text{R}^{10'}$ ,  $-\text{C}(\text{O})\text{R}^9$ ,  $-\text{C}(\text{O})\text{NR}^9\text{R}^{10'}$  and  $-\text{C}(\text{O})\text{OR}^9$ ;
- $R^{2'}$  is hydrogen, halo, nitro, cyano or  $-\text{X}^2\text{R}^{12'}$ ;
- $R^{12'}$  is hydrogen, phosphonooxy or a group selected from  $\text{C}_{1-6}$ alkyl,  $\text{C}_{2-6}$ alkenyl,  $\text{C}_{2-6}$ alkynyl,  $\text{C}_{3-6}$ cycloalkyl,  $\text{C}_{3-6}$ cycloalkenyl, aryl, aryl $\text{C}_{1-4}$ alkyl, aryl $\text{C}_{2-4}$ alkenyl, aryl $\text{C}_{2-4}$ alkynyl,

heterocyclyl, heterocyclylC<sub>1-4</sub>alkyl, heterocyclylC<sub>2-4</sub>alkenyl and heterocyclylC<sub>2-4</sub>alkynyl, which group is optionally substituted by 1, 2 or 3 substituents independently selected from halo, hydroxy, phosphonooxy, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxy, -NR<sup>15'</sup>R<sup>16'</sup>, -NHC(O)NR<sup>15'</sup>R<sup>16'</sup>, -C(O)R<sup>15'</sup> and -C(O)OR<sup>15'</sup>;

5 R<sup>3'</sup> is hydrogen, halo or -X<sup>3</sup>R<sup>13'</sup>;

R<sup>13'</sup> is hydrogen, phosphonooxy or a group selected from C<sub>1-6</sub>alkyl, C<sub>2-6</sub>alkenyl, C<sub>2-6</sub>alkynyl, C<sub>3-6</sub>cycloalkyl, C<sub>3-6</sub>cycloalkenyl, aryl, arylC<sub>1-4</sub>alkyl, arylC<sub>2-4</sub>alkenyl, arylC<sub>2-4</sub>alkynyl, heterocyclyl, heterocyclylC<sub>1-4</sub>alkyl, heterocyclylC<sub>2-4</sub>alkenyl and heterocyclylC<sub>2-4</sub>alkynyl which group is optionally substituted by 1 or 2 substituents independently selected from -NR<sup>7'</sup>R<sup>8'</sup>,

10 -C(O)NR<sup>7'</sup>R<sup>8'</sup>, halo, hydroxy, phosphonooxy, C<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxy, hydroxyC<sub>1-4</sub>alkyl, phosphonooxyC<sub>1-4</sub>alkyl, hydroxyC<sub>1-4</sub>alkylcarbonyl, phosphonooxyC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylcarbonyl, aminoC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylaminoC<sub>1-4</sub>alkylcarbonyl and bis(C<sub>1-4</sub>alkyl)aminoC<sub>1-4</sub>alkylcarbonyl;

R<sup>7'</sup> and R<sup>8'</sup> are independently selected from hydrogen, heterocyclyl, heterocyclylC<sub>1-4</sub>alkyl,

15 C<sub>1-4</sub>alkylheterocyclylC<sub>1-4</sub>alkyl, C<sub>1-6</sub>alkyl, hydroxyC<sub>1-6</sub>alkyl, phosphonooxyC<sub>1-6</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-6</sub>alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, hydroxyC<sub>3-6</sub>cycloalkyl, phosphonooxyC<sub>3-6</sub>cycloalkyl, hydroxyC<sub>1-4</sub>alkylC<sub>3-6</sub>cycloalkyl, phosphonooxyC<sub>1-4</sub>alkylC<sub>3-6</sub>cycloalkyl, hydroxyC<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, phosphonooxyC<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, hydroxyC<sub>1-4</sub>alkylC<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl,

20 phosphonooxyC<sub>1-4</sub>alkylC<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>3-6</sub>cycloalkyl, C<sub>1-4</sub>alkoxyC<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, haloC<sub>1-6</sub>alkyl, haloC<sub>3-6</sub>cycloalkyl, haloC<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, C<sub>2-6</sub>alkenyl, C<sub>2-6</sub>alkynyl, cyanoC<sub>1-4</sub>alkyl, aminoC<sub>1-6</sub>alkyl, C<sub>1-4</sub>alkylaminoC<sub>1-6</sub>alkyl, bis(C<sub>1-4</sub>alkyl)aminoC<sub>1-6</sub>alkyl, hydroxyC<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, phosphonooxyC<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, hydroxyC<sub>1-4</sub>alkylcarbonyl,

25 phosphonooxyC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylcarbonyl, aminoC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylaminoC<sub>1-4</sub>alkylcarbonyl and bis(C<sub>1-4</sub>alkyl)aminoC<sub>1-4</sub>alkylcarbonyl;

or R<sup>7'</sup> and R<sup>8'</sup> together with the nitrogen to which they are attached form a heterocyclic ring which ring is monocyclic or bicyclic and comprises 4 to 7 ring atoms of which one is nitrogen and of which another is optionally selected from N, NH, O, S, SO and SO<sub>2</sub>, and which ring is

30 optionally substituted on carbon or nitrogen by 1 or 2 substituents independently selected from C<sub>1-4</sub>alkyl, hydroxy, phosphonooxy, C<sub>1-4</sub>alkoxy, hydroxyC<sub>1-4</sub>alkyl, phosphonooxyC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, hydroxyC<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, phosphonooxyC<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl,

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C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkoxy, hydroxyC<sub>1-4</sub>alkylcarbonyl, phosphonooxyC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylcarbonyl, aminoC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylaminoC<sub>1-4</sub>alkylcarbonyl and bis(C<sub>1-4</sub>alkyl)aminoC<sub>1-4</sub>alkylcarbonyl, and where a ring -CH<sub>2</sub>- is optionally replaced with -C(O)-;

- 5 **R<sup>9'</sup>, R<sup>10'</sup>, R<sup>15'</sup> and R<sup>16'</sup>** are independently selected from hydrogen, C<sub>1-6</sub>alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>3-6</sub>cycloalkylC<sub>1-4</sub>alkyl, hydroxyC<sub>1-6</sub>alkyl, phosphonooxyC<sub>1-6</sub>alkyl, haloC<sub>1-6</sub>alkyl, aminoC<sub>1-6</sub>alkyl, C<sub>1-4</sub>alkylaminoC<sub>1-6</sub>alkyl and bis(C<sub>1-4</sub>alkyl)aminoC<sub>1-6</sub>alkyl;  
or **R<sup>9'</sup> and R<sup>10'</sup>** together with the nitrogen to which they are attached form a heterocyclic ring which ring is monocyclic or bicyclic and comprises 4 to 7 ring atoms of which one is nitrogen  
10 and of which another is optionally selected from N, NH, O, S, SO and SO<sub>2</sub>, and which ring is optionally substituted on carbon or nitrogen by 1 or 2 substituents independently selected from C<sub>1-4</sub>alkyl, hydroxy, phosphonooxy, C<sub>1-4</sub>alkoxy, hydroxyC<sub>1-4</sub>alkyl, phosphonooxyC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, hydroxyC<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, phosphonooxyC<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkyl, C<sub>1-4</sub>alkoxyC<sub>1-4</sub>alkoxy, hydroxyC<sub>1-4</sub>alkylcarbonyl, phosphonooxyC<sub>1-4</sub>alkylcarbonyl,  
15 C<sub>1-4</sub>alkylcarbonyl, aminoC<sub>1-4</sub>alkylcarbonyl, C<sub>1-4</sub>alkylaminoC<sub>1-4</sub>alkylcarbonyl and bis(C<sub>1-4</sub>alkyl)aminoC<sub>1-4</sub>alkylcarbonyl, and where a ring -CH<sub>2</sub>- is optionally replaced with -C(O)-;  
provided that a compound of formula (IA) contains at least one phosphonooxy group.

- 20 10. A compound according to claim 9 or a salt or ester thereof wherein the compound or salt or ester thereof contains only one phosphonooxy group.
11. A compound according to claim 9 or a salt or ester thereof wherein X is NH.
- 25 12. A compound according to claim 9 or a salt or ester thereof wherein R<sup>4</sup> is hydrogen.
13. A compound according to claim 9 or a salt or ester thereof wherein R<sup>5</sup> is aryl optionally substituted by 1 or 2 halo.
- 30 14. A pharmaceutical composition comprising a compound of formula (I) as defined in claim 1 or a pharmaceutically acceptable salt, ester or prodrug thereof, or a compound of

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formula (IA) as defined in claim 9 or a pharmaceutically acceptable salt or ester thereof in association with a pharmaceutically acceptable diluent or carrier.

15. A compound of formula (I) as defined in claim 1 or a pharmaceutically acceptable salt, ester or prodrug or a compound of formula (IA) as defined in claim 9 or a pharmaceutically acceptable salt or ester thereof for use in therapy.

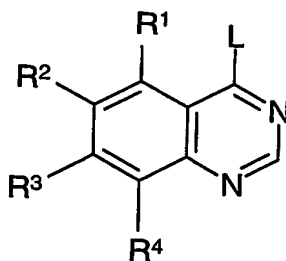
16. The use of a compound of formula (I) as defined in claim 1 or a pharmaceutically acceptable salt, ester or prodrug or a compound of formula (IA) as defined in claim 9 or a pharmaceutically acceptable salt or ester thereof in the preparation of a medicament for the treatment of a hyperproliferative disease such as cancer.

17. The use as defined in claim 16 wherein the cancer is colorectal, breast, lung, prostate, bladder, renal or pancreatic cancer or leukaemia or lymphoma.

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18. A method of treating a human suffering from a hyperproliferative disease such as cancer comprising the steps of administering to a person in need thereof a therapeutically effective amount of a compound of formula (I) as claimed in claim 1 or a pharmaceutically acceptable salt, ester or prodrug thereof or a compound of formula (IA) as claimed in claim 9 or a pharmaceutically acceptable salt or ester thereof.

19. A process for the preparation of a compound of formula (I) as defined in claim 1 or a salt, ester or prodrug thereof, which process comprises reacting a compound of formula (II) wherein  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  are as defined in claim 1

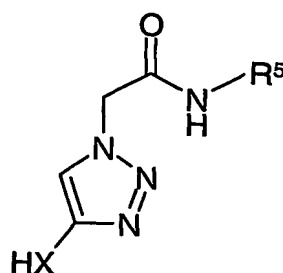


(II)

where  $L$  is a suitable leaving group with a compound of formula (III) wherein  $R^5$  and  $X$  are as defined in claim 1

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(III)

in the presence of hydrochloric acid in dioxane under an inert atmosphere,  
and thereafter if necessary:

- 5 i) converting a compound of the formula (I) into another compound of the formula (I); and/or  
ii) removing any protecting groups; and/or  
iii) forming a salt, ester or prodrug thereof.

20. A process for the preparation of a compound of formula (IA) as defined in claim 9 or a  
10 salt or ester thereof, which process comprises phosphorylation of a suitable compound of  
formula (I) followed by deprotection of the phosphate group.